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ABSTRACT

College of Liberal Arts courses in which Martin Luther King Program (MLK) students registered from 1970 to 1972 were studied to explore the relationship of course characteristics to differences in performance between MLK and non-MLK students. Courses in which 15 or more MLK students received A through F grades were selected and divided into two groups: (1) proportion of MLK passing the course no different from non-MLK (N=27), and (2) proportion of non-MLK passing the course greater than MLK (N=13). Instructors were surveyed to assess course characteristics such as mode of instruction, purpose of course, type of exam items, and amount of reading. Class size and course level were also studied. Only one of the 11 items studied, the basis on which grades were determined, showed a significant difference between the two course performance groups; MLK students were less likely to perform as well as non-MLK students when grades were based solely on exams or quizzes. Possible explanations for the lack of more significant findings are discussed (e.g., broad individual differences within MLK and non-MLK groups). (Author/JMF)

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THE RELATIONSHIP OF COURSE CHARACTERISTICS TO DIFFERENTIAL PERFORMANCE OF MARTIN LUTHER KING PROGRAM AND OTHER STUDENTS IN SELECTED COLLEGE OF LIBERAL ARTS COURSES

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Abstract

College of Liberal Arts courses in which Martin Luther King Program (MLK) students registered from 1970 to 1972 were studied to explore the relationship of course characteristics to differences in performance between MLK and non-MLK students. Courses in which 15 or more MLK students received A through F grades were selected and divided into two groups: (1) proportion of MLK passing the course no different from non-MLK (N = 27), and (2) proportion of non-MLK passing the course greater than MLK (N = 13). Instructors were surveyed to assess course characteristics such as mode of instruction, purpose of course, type of exam items, and amount of reading. Class size and course level were also studied. Only one of the 11 items studied--the basis on which grades were determined--showed a significant difference between the two course performance groups; MLK students were less likely to perform as well as non-MLK students when grades were based solely on exams or quizzes. Possible explanations for the lack of more significant findings are discussed (e.g., broad individual differences within MLK and non-MLK groups).

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More than 2,000 students have entered the University through the Martin Luther King (MLK) Program since it was established in 1968 to facilitate the University entrance of educationally and financially disadvantaged students. While the services of the Program vary considerably from college to college, counseling, course tutoring, financial aid, and special study rooms are provided in most colleges. MLK students are alike in that they all entered the University through the Program; they differ on almost every other variable. MLK students represent every racial group in the United States, vary considerably in age, and show a broad range of previous performance levels and aptitudes.

Research on students in the Program has been done to assist those making decisions concerning it--decisions which relate both to programming and to allocation of resources. Earlier research has focused on describing the progress of MLK students toward graduation (Hendel, 1973c), summarizing their performance in College of Liberal Arts (CLA) and General College (GC) courses (Hendel, 1973a; Hendel, 1973b), comparing their performance with a randomly selected group entering the University at the same point in time (Armstrong & Hall, 1976), and assessing the impact of a special program in GC (Moen & Giese, 1969-70).

The present study was stimulated by Hendel's work on MLK students' course performance in CLA. His research focused on CLA courses in which MLK students

had registered from fall quarter, 1970 through summer session II, 1972 (a total of 650 students and over 1,015 different courses). The study concentrated on the 104 courses for which at least ten MLK students had registered, and reported average grades of MLK students as well as the distributions of the various letter grades in each course. Hendel noted that an average grade of 2.00 (a C average) or higher was achieved by MLK students in over 94 percent of these courses and that there were no differences in grade point average for any of the specific subgroups within the MLK student group (college of entrance, entry year, ethnic background, sex, age at entrance, or status at entrance).

Hendel reported a wide range of average course grades for the MLK students --from 1.25 in Journalism 1001 to 3.89 in American Indian Studies 5211. Differences such as these led him to ask further questions about the nature of the differences:

> Do the courses in which MLK students received lower average grades rely predominantly on objective examinations in determining course grades? How do the course grades for MLK students compare with the grades for all students who were registered for a specific course? (1973a, p. 15)

The present study was initiated to pursue the answers to these questions. The first question was expanded to include a number of course characteristics other than type of examination as described by the faculty teaching the courses during the period in question. The second question was modified slightly to compare MLK student grades with the grades of all <u>non-MLK</u> students in the same course.

Method

Data available from Hendel's study indicated the number of MLK students registered in each course, their average grade in the course, and the number and percentage of grades in each letter category (A through F, P or S, N, I, and W). Matching data on non-MLK students were obtained through a review of the grade distribution reports prepared quarterly by the Office of Admissions and Records. These reports were examined for the period covered by Hendel's study, and the grade distributions and number of students in each course were recorded. (One problem arose when it was discovered that there were no grade distribution reports for the summer sessions of 1971; since we could not have non-MLK data from this time period, it was decided to delete the MLK course data from these two summer sessions. This was done by referring back to MLK student transcripts and subtracting summer work found for each course from the figures reported by Hendel. This accounts for minor discrepancies in number of cases, grade distributions, and average grades between the present report and Hendel's.)

Hendel originally reported data on 104 courses--those in which MLK total enrollment was more than ten. For the present study, further restrictions were placed on course size to insure stability in calculated statistics (e.g., average grades). Courses were included only if the number of MLK students who received A through F grades (those on which the grade averages are based) was greater than or equal to fifteen. This restriction reduced the original pool of courses from 104 to 42; missing data for two courses further reduced the number of courses to 40.

Descriptive data on these 40 courses may be found in Table 1, which shows

course number, grading distributions for MLK and non-MLK students, and total enrollment for both groups. (Readers interested in learning more about these courses should consult the 1971-73 College of Liberal Arts Bulletin, University of Minnesota, Bulletin Number 15.)

In comparing the grade distributions and average course grades of the MLK and non-MLK groups presented in Table 1, it is obvious that the performance of the two groups differs markedly in many courses. Whether or not these differences are "real" or the result of chance variation in the samples was the next question we raised. To answer this question, we determined the ratio of passing grades (A, B, C, D, and P) to non-passing grades (F, N, I, and W) achieved by the MLK group and by the non-MLK group in each course. The ratios of the two groups of students were analyzed by means of a Chi-square test to determine whether the differences were noteworthy. If the probability of the observed differences occurring as a result of chance variation was less than .05 (five in one hundred), assuming no difference in population performance, the differences was considered significant.

As an example of this procedure, the results for a sociology course are presented here:

Sociology 3101

	Passing grades	Non-passing grades
MLK	24	8
Non-MLK	2,392	282

Table 1

Comparison of MLK and Non-MLK Student Performance in 40 Selected CLA Courses

Course	Enrollment[a]	Mean GPA	N[b]	Percentage of passing grades[c]						Percentage of non-passing grades[c]				
				A	B	C	D	P	Total	F	N	I	W	Total
Afro 1015	80													
MLK		2.57	72	10	28	33	4	3	78	0	0	19	3	22
Non-MLK		2.47	490	7	18	22	7	20	74	0	0	21	5	26
Afro 1025	87													
MLK		3.05	53	26	36	17	0	2	81	2	0	17	0	19
Non-MLK		3.21	467	27	34	7	0	20	88	2	0	5	4	11
Afro 1045	79													
MLK		2.81	102	7	56	11	4	2	80	1	0	12	8	21
Non-MLK		2.70	370	5	38	20	3	18	84	0	0	14	4	18
Afro 1301	55													
MLK		2.90	58	9	45	12	2	2	70	0	0	29	2	31
Non-MLK		3.52	379	34	24	0	0	28	86	1	7	7	0	15
Afro 3055	36													
MLK		3.24	44	25	57	5	0	0	87	0	0	11	2	13
Non-MLK		3.05	171	10	48	7	0	17	82	0	0	11	8	19
Afro 3061	41													
MLK		3.37	42	29	31	5	0	0	65	0	0	31	5	36
Non-MLK		2.96	132	8	29	14	0	14	65	2	0	31	3	36
Afro 3062	27													
MLK		3.50	34	38	38	0	0	0	76	0	0	15	9	24
Non-MLK		3.12	89	17	27	17	0	12	73	1	0	25	1	27
Afro 3072	91													
MLK		2.93	56	27	27	20	4	2	80	2	0	18	2	22
Non-MLK		3.18	408	26	25	12	0	12	75	1	3	22	0	26

continued

Table 1 (continued)

Course	Enrollment[a]	Mean GPA	N[b]	Percentage of passing grades[c]						Percentage of non-passing grades[c]				
				A	B	C	D	P	Total	F	N	I	W	Total
Afro 3105	35													
MLK		2.80	26	15	15	27	0	0	57	0	0	39	4	43
Non-MLK		3.36	180	24	19	6	0	24	73	0	0	24	2	26
AmIn 3061	67													
MLK		3.17	27	19	41	7	0	4	71	0	0	22	7	29
Non-MLK		3.22	476	22	31	8	0	22	83	0	0	14	3	17
Anth 1001	29													
MLK		1.88	26	0	8	42	15	0	65	0	0	31	4	35
Non-MLK		2.47	1,687	13	21	32	8	11	85	2	1	10	3	16
Anth 1002	29													
MLK		2.18	59	9	25	20	12	5	71	9	0	15	5	29
Non-MLK		2.96	4,890	26	27	19	3	11	86	1	0	11	2	14
ArtS 1101	26													
MLK		2.84	27	11	37	22	0	4	74	0	0	19	7	26
Non-MLK		2.89	1,494	16	36	19	1	10	82	1	1	10	5	17
Comm 1001	26													
MLK		2.16	35	0	17	31	3	0	51	3	0	40	6	49
Non-MLK		2.75	2,207	11	39	22	3	8	83	0	0	13	4	17
Comp 1001	24													
MLK		2.67	120	13	25	28	4	8	78	0	0	17	4	21
Non-MLK		2.86	7,544	16	37	22	2	7	84	0	0	12	3	15
Comp 1002	24													
MLK		2.79	107	11	31	19	3	10	74	0	0	21	6	27
Non-MLK		3.02	7,146	19	34	15	2	11	81	0	0	14	4	18
Comp 1003	22													
MLK		2.94	63	14	25	14	2	16	71	0	0	24	5	29
Non-MLK		3.11	4,544	21	27	11	1	15	75	0	0	19	5	24

continued

Table 1 (continued)

Course	Enrollment[a]	Mean GPA	N[b]	Percentage of passing grades[c]						Percentage of non-passing grades[c]				
				A	B	C	D	P	Total	F	N	I	W	Total
Econ 1001	40													
MLK		2.21	33	9	18	12	12	9	60	6	0	24	9	39
Non-MLK		2.76	3,924	18	25	23	5	7	78	1	0	14	6	21
Econ 1002	35													
MLK		2.33	20	10	15	40	10	5	80	0	0	10	10	20
Non-MLK		2.73	3,226	20	25	23	8	7	83	0	0	13	4	17
Geog 1301	22													
MLK		2.10	27	4	19	37	19	7	86	0	0	4	11	15
Non-MLK		2.46	3,414	12	24	29	8	11	84	2	0	9	4	15
Hist 1301	27													
MLK		2.94	20	20	35	25	0	5	85	0	0	5	10	15
Non-MLK		2.81	2,017	15	32	21	3	11	82	0	0	14	4	18
Hist 1302	25													
MLK		2.68	29	14	31	24	7	0	76	0	0	21	4	25
Non-MLK		2.87	1,892	17	30	20	3	10	80	0	0	16	4	20
Hum 1001	65													
MLK		2.62	34	6	27	29	0	6	68	0	0	29	3	32
Non-MLK		3.01	3,698	19	23	14	2	22	80	0	1	14	5	20
Jour 1001	54													
MLK		1.25	21	0	5	24	33	0	62	14	0	19	5	38
Non-MLK		2.34	1,329	8	25	30	11	5	79	2	1	10	8	21
Phil 1001	33													
MLK		1.95	42	7	10	14	12	5	48	7	2	29	14	52
Non-MLK		2.58	3,317	18	16	17	7	15	73	3	2	15	6	26
Pol 1001	208													
MLK		2.06	46	2	15	37	11	4	69	2	0	20	9	31
Non-MLK		2.46	3,698	10	25	32	7	10	84	2	0	11	4	17

continued

Table 1 (continued)

Course		Enrollment[a]	Mean GPA	N[b]	Percentage of passing grades[c]						Percentage of non-passing grades[c]				
					A	B	C	D	P	Total	F	N	I	W	Total
PO	1001	[illegible]													
	MLK		3.18	30	27	17	10	3	10	67	0	0	27	7	34
	Non-MLK		3.66	545	49	19	2	0	7	77	0	0	14	8	22
Psy	1001	388													
	MLK		1.52	81	4	7	30	9	3	53	20	1	19	9	49
	Non-MLK		2.38	7,292	15	17	38	7	6	83	4	1	8	3	16
Psy	1002	273													
	MLK		2.52	35	9	26	34	0	9	78	3	3	3	14	23
	Non-MLK		2.63	5,382	19	15	36	6	9	85	3	1	8	3	15
Soc	1001	284													
	MLK		2.33	104	16	13	30	13	2	74	4	0	21	2	27
	Non-MLK		2.77	8,729	23	24	26	6	8	87	1	0	10	3	14
Soc	1002	172													
	MLK		1.95	21	0	29	38	24	0	91	5	0	0	5	10
	Non-MLK		2.57	1,354	14	25	31	5	12	87	2	0	8	3	13
Soc	1004	31													
	MLK		2.97	37	38	19	16	8	3	84	3	0	14	0	17
	Non-MLK		3.09	1,504	34	23	21	2	4	84	1	0	11	5	17
Soc	3101	227													
	MLK		2.83	32	25	19	19	9	3	75	0	0	13	13	26
	Non-MLK		3.09	2,674	30	23	17	3	17	90	1	1	7	2	11
Soc	3801	168													
	MLK		2.60	23	13	22	26	0	9	70	4	0	13	13	30
	Non-MLK		2.86	1,150	25	29	24	3	3	84	3	0	8	6	17
Span	1101	28													
	MLK		2.76	66	8	12	9	3	27	59	0	2	26	14	42
	Non-MLK		3.10	1,945	19	14	9	3	32	77	0	1	12	11	24

continued

Table 1 (continued)

Course	Enrollment[a]	Mean GPA	N[b]	Percentage of passing grades[c]						Percentage of non-passing grades[c]				
				A	B	C	D	P	Total	F	N	I	W	Total
Span 1102	26													
MLK		2.68	47	11	13	11	6	30	71	0	0	19	11	30
Non-MLK		3.14	1,713	15	11	6	1	46	79	1	2	10	8	21
Span 3505	20													
MLK		2.40	16	6	31	50	6	0	93	0	0	6	0	6
Non-MLK		3.00	5	40	20	0	20	0	80	0	0	0	20	20
Spch 1101	23													
MLK		2.85	37	16	35	16	5	3	75	0	3	19	3	25
Non-MLK		3.15	3,184	25	43	11	0	8	87	0	0	9	4	13
SW 3001	98													
MLK		3.08	32	19	47	13	0	3	82	0	0	13	6	19
Non-MLK		3.41	1,630	40	27	8	0	12	87	0	0	11	2	13
Th 1101	494													
MLK		2.61	31	7	39	23	7	13	89	0	0	7	7	14
Non-MLK		2.98	4,410	23	37	19	3	11	93	0	0	5	2	7

Note. Courses are included in this study only if the number of MLK students receiving A through F grades was greater than or equal to 15. The time period covered was fall, 1970 through summer session II, 1972, excluding both summer sessions of 1971.

[a]Mean enrollment in regular sections (honors and other special sections excluded).

[b]Total number of students enrolled by group.

[c]Percentages of passing and non-passing grades may not total 100 owing to rounding error.

The value of the Chi-square statistic for these data is 6.90, and the probability associated with that value is .01. Therefore, the probability of such an extreme value occurring by chance is less than one in one hundred and the result is deemed significant. We may conclude that a higher proportion of non-MLK students pass this course than MLK students.

After performing this analysis, each of the 40 courses was placed in one of three groups: (1) those in which the proportion of MLK students passing the course was greater than that of non-MLK students; (2) those with no difference between the MLK and non-MLK students; and (3) those in which the non-MLK students passed the course in higher proportion. Appendix A gives the results of this analysis by the groups listed above. Note that 68.3 percent of the courses show no difference at all in the proportion of passing grades obtained by MLK and non-MLK students. When there is a significant difference, it is always in the direction of non-MLK students passing the course proportionally more often (i.e., no courses fell into the first group).

Whether or not specific course characteristics could be found to differ between these two course groups was our next task. We realized that many course characteristics of interest were not recorded in either Admissions and Records files or in the University's CLA Bulletin since the only information available from those sources was size of course, grades, names of instructors of record, and a brief description of course content. It was therefore decided that a survey of the faculty teaching the courses would be the best way of gathering the desired information. A 14-item questionnaire covering course content (Appendix B) was sent to each faculty member listed in Admissions and Records files as instructor of record for each of the 40 courses in question. Table 2 gives a summary of survey returns after one mailed follow-up, and when

necessary, telephone contact with the surveyed individuals or their departments.

Results

This section contrasts the survey responses of instructors of courses in which there was no difference in proportion passing between MLK and non-MLK students and the responses of instructors in courses where the proportion of non-MLK students passing the course was higher than that of MLK students. The Fisher Exact Probability Test was used to determine whether observed differences were statistically significant. An alpha level of .05 was established as the minimum significance level; at this level the probability of the observed difference occurring by chance, under the hypothesis of no difference between the groups, is less than five in one hundred.

Items are analyzed here only if questionnaire results indicated a uniform statement on a particular subject over time and instructors. For example, Item I on the survey asks the rank of the primary instructor, the individual having the most face-to-face contact with the class. For this particular question, many instructors indicated that rank varied from quarter to quarter or that instructors of various ranks were employed within a particular quarter. Since the data on this item do not seem to be clear-cut, we decided to eliminate it from the study.

A number of courses show disagreement among instructors in response to certain items. In these cases, disagreements were either categorized according to the breakdown chosen if it was feasible (e.g., if both instructors used a combination of exam techniques but differed as to the exact combination of

Table 2

Summary of Response Rates to the Course Follow-up Survey

Course	Sent	Returned	
		Number	Percentage
Afro 1015	1	1	100.0
Afro 1025	2	2	100.0
Afro 1045	1	1	100.0
Afro 1301	1	1	100.0
Afro 3055	1	1	100.0
Afro 3061	1	1	100.0
Afro 3062	1	1	100.0
Afro 3072	1	1	100.0
Afro 3105	1	1	100.0
AmIn 3061	2	1	50.0
Anth 1001	2	2	100.0
Anth 1002	1	1	100.0
ArtS 1101	1	1	100.0
Comm 1001	2	2	100.0
Comp 1001	2	2	100.0
Comp 1002	3	2	66.7
Comp 1003	2	1	50.0
Econ 1001	2	2	100.0
Econ 1002	1	1	100.0
Geog 1301	2	2	100.0
Hist 1301	1	1	100.0
Hist 1302	2	1	50.0
Hum 1001	2	2	100.0
Jour 1001	1	1	100.0
Phil 1001	2	2	100.0
Pol 1001	2	2	100.0
PO 1001	1	1	100.0
Psy 1001	1	1	100.0
Psy 1002	1	1	100.0
Soc 1001	2	2	100.0
Soc 1002	1	1	100.0
Soc 1004	1	1	100.0
Soc 3101	1	1	100.0
Soc 3801	1	1	100.0
Span 1101	1	1	100.0
Span 1102	1	1	100.0
Span 3505	1	1	100.0
Spch 1101	1	1	100.0
SW 3001	1	1	100.0
Th 1101	1	1	100.0
Total	55	51	92.7

exam, they were placed in the "combination" group) or eliminated from the analysis (e.g., if one instructor used multiple choice exams only and another used essay exams only).

Course characteristics of particular interest to us were (in order as they appear on the survey):

Item I.	Rank of primary instructor
Item II.	Purpose of course
Item III.	Type of instruction
Item IV.	Material of special interest to minority students
Item VIII.	Basis on which grades were determined
Item IX.	Type of item on exams
Item XI.	Whether or not a final exam was given
Item XIII.	Type of required readings
Item XIV.	Pages of readings per week

Each of these factors will be discussed in turn. Two other variables of interest--course level and class size--were also studied using information drawn from Admissions and Records files.

Rank of primary instructor

As indicated above, the responses to this item showed such variability that it was dropped from the analysis.

Course purpose

Instructors could designate the primary purpose of their course as: the communication of a body of knowledge, the development of appreciation, or the learning of a skill or skills. Since the communication of knowledge as a goal covers almost all beginning courses in the academic disciplines, we divided the respondents into two groups--the communication of knowledge, and a group which combined development of appreciation or learning of a skill as the primary purposes. (Instructors indicating a combination of goals, nonrespondents to the item, or cases where two or more instructors disagreed as to

the goals of the same course were eliminated from the analysis.) The table below shows the number of courses in each category:

	Non-MLK higher	No difference
Communicate knowledge	8	12
Develop appreciation or impart skills	2	10

The results of the Fisher Exact Probability Test ($p = .13$) suggest that there is no significant difference on this variable between the two groups (i.e., stated purpose of the course does not appear to be related to differential group performance).

Type of instruction

Another hypothesis in the study was that various types of instruction might be related to these performance differences. Instructors indicated whether the major instructional mode was lecture, discussion, laboratory, other, or a combination of techniques. Excluding disagreements among instructors, the results are as shown below:

	Non-MLK higher	No difference
Lecture only	7	13
Other or combination	4	11

A Fisher Exact Probability Test applied to these data yields a probabil-

ity of .44, which is not significant. Type of instruction is apparently not related to differential group performance.

Material of special interest to minority students

Since many students in the MLK Program are members of racial minority groups, it was hypothesized that material of particular interest to minority students might affect their performance in the course. Therefore, instructors were asked to indicate their opinion of the extent to which their course covered material of special interest to minority students. Excluding cases of disagreement and no response, results are as shown below:

	Non-MLK higher	No difference
Some or extensive coverage	11	20
Little or no coverage	1	6

The Fisher Exact Probability Test ($p = .27$) indicates that there is no significant difference in this variable between the two performance groups.

Basis on which grades were determined

Grades may be assigned in a course in a variety of ways: exams or quizzes only, on the basis of papers or projects, on the basis of class participation, or some combination of these techniques. The results on this variable, eliminating cases of disagreement between instructors, are shown below:

	Non-MLK higher	No difference
Exams or quizzes only	7	4
Combination of exams and other factors	4	21

The Fisher Exact Probability Test yields a significant probability value of .01. Thus, it may be concluded that MLK students are more likely to perform as well as other, non-MLK, students in courses where some factor or factors other than exams are taken into account during the grade assignment process.

Type of exam item

Course examinations may use items of a variety of types: multiple choice, completion or short answer, essay, true/false, or some combination of these types. One way to summarize exam item type is by multiple choice items versus all other types. The results of this analysis are given below, minus those who did not respond and cases of disagreement:

	Non-MLK higher	No difference
Multiple choice only	3	4
Other or combination	10	18

A probability of .53 is obtained using the Fisher Exact Probability Test, indicating that multiple choice items have not been used more often in one performance group than in the other.

Another way to look at the test item data is to contrast essay exams (the non-objective type) with all other types. This comparison results in the fol-

lowing breakdown:

	Non-MLK higher	No difference
Essay only	1	7
Other or combination	7	14

The Fisher Exact Probability Test result for this table is .26, indicating a non-significant difference.

Whether or not a final exam was given

Courses differ in terms of whether a final exam is given and, if so, whether it covers the entire quarter or only the period since the last exam. The responses to this item on the survey were divided into two groups, those who gave a final and those who didn't (with cases of disagreement eliminated).

	Non-MLK higher	No difference
Final	12	23
No final	0	4

The Fisher Exact Probability value, .21, indicates that there is no significant difference between the groups on this variable.

Type of required readings

Instructors may require many different types of readings in their courses, ranging from short handouts to articles to standard textbooks. Omitting cases of no response and disagreement among instructors, the results for this item

were placed into two groups, textbook only and combination or other type.

	Non-MLK higher	No difference
Textbook only	6	6
Other or combination	6	17

The Fisher Exact Probability Test yields a probability value of .15, indicating no significant difference between the two groups.

Pages of readings per week

Instructors were asked to indicate the number of pages of required readings per week. Their responses were divided into two groups, those requiring 30 pages or fewer per week, and those requiring more than 30. (Two cases where instructors reported different averages were assigned to the smaller category.)

	Non-MLK higher	No difference
30 or fewer pages	4	11
31 or more pages	9	16

A probability of .40 resulting from the Fisher Exact Probability Test indicates that this difference is not statistically significant.

Two other course characteristics on which differences between these performance groups might be hypothesized are course level and class size. Course level is readily obtainable from the course number, while class size was determined from Admissions and Records Class Enrollment Reports.

Course Level

Courses may be roughly divided into beginning and advanced courses by assigning 1XXX level courses to the former group and 3XXX and 5XXX level courses to the latter. For the 40 courses studied, this breaks down as follows:

	Non-MLK higher	No difference
Beginning	12	18
Advanced	1	9

A Fisher Exact Probability Test on these data yields a probability value of .08, which suggests that there are no significant differences in course level between the two groups studied. The difference here is near significance, however, which suggests that MLK students do less well in 1XXX level courses. A review of the courses in the non-MLK higher group shows that most of these courses are either required or used by many students to complete college distribution requirements.

Class size

For the purposes of this analysis, class size was divided somewhat arbitrarily, with classes smaller than 50 students considered small and classes of 50 or more students considered large. The 40 courses fall into the categories shown below:

	Non-MLK higher	No difference
Small	7	16
Large	6	11

A Fisher Exact Probability Test value of .50 indicates that class size does not appear to be related to differential performance between these two groups.

Discussion

Only one item of the eleven studied, the basis on which grades were determined, showed a significant difference between the courses in which there was no difference in group performance and the courses in which non-MLK students performed better. This finding is somewhat disappointing in that the investigators had hoped to identify factors affecting performance to which counselors, instructors, and those planning support services might pay special attention. For example, if we had determined that MLK students perform less well in large, impersonal course settings, counselors could direct these students to courses where a better student-teacher ratio prevails; or if courses with heavy reading loads were found to be especially problematic to the MLK group, intensified support in the study skills area might be called for. Such recommendations could potentially increase the probability that MLK students would do satisfactory work and thus remain at the University.

The natural conclusion to be drawn from these findings is that individual differences along such intrinsic dimensions as ability and motivation are

more important than extrinsic factors relating to course structure in accounting for differential performance by MLK students in certain courses. Given the acknowledged heterogeneity within the MLK group, it is perhaps unreasonable to expect that there is any one factor relating to course structure which would affect all the MLK students in the same way and yet have no effect, or have a different effect, on all other students taking the course. Our conclusions would therefore argue for a more personalized approach to student performance problems in the Program.

Of course, the fact that we did not find group differences in this study does not mean that they do not exist; it may mean that our research design was not sensitive enough to pick out valid differences. Perhaps instructor responses to a written questionnaire are not a valid index of the "true" state of affairs in a course. If this is the case, a more experimental approach where the investigator could control course characteristics might yield clearer results. While this might make better sense from a research point of view, there are obvious problems in practical implementation in the context of departmental curricula.

Another problem relating to the sensitivity of our research design resulted from the type of data with which we are dealing. Since almost all of the factors we were investigating could only be described categorically, our analysis procedures were limited to the use of non-parametric statistics (e.g., Chi-square, Fisher Exact Probability Test) which lack the power of the more commonly used parametric techniques (e.g., the analysis of variance.)

Despite its drawbacks, the present study may serve to clarify some questions about the quality of MLK students' coursework. There is little evidence which would demonstrate that they do less well (defined as a smaller proportion

passing) in more challenging courses (as defined by pages of reading, type of reading material, purpose of the course). In fact, of the courses studied here there is no difference between MLK and non-MLK student performance in nearly two-thirds of the courses.

One final finding of importance in the present study is the listing of courses which MLK students as a group seem to find difficult--for whatever reason. These are the courses in the non-MLK higher category. Those working with MLK students might use this listing to confer with the departments concerned to determine whether additional student support is needed in these courses.

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Appendix A

Comparisons of Proportions of Passing and Non-Passing Grades for MLK and Non-MLK Students in 40 CLA Courses

Course	Group	Number of grades		χ^2	Sig. level
		Passing	Non-passing		
No difference in proportion of MLK and Non-MLK students passing					
Afro 1015	MLK	56	16	.45	n.s.[a]
	Non-MLK	363	127		
Afro 1025	MLK	43	10	2.5[illegible]	n.s.
	Non-MLK	414	53		
Afro 1045	MLK	81	21	.81	n.s.
	Non-MLK	308	62		
Afro 3055	MLK	38	6	.50	n.s.
	Non-MLK	140	31		
Afro 3061	MLK	27	15	.00	n.s.
	Non-MLK	85	47		
Afro 3062	MLK	26	8	.15	n.s.
	Non-MLK	65	24		
Afro 3072	MLK	44	12	.43	n.s.
	Non-MLK	304	104		
Afro 3105	MLK	15	11	2.95	n.s.
	Non-MLK	133	47		
AmIn 3061	MLK	19	8	2.91	n.s.
	Non-MLK	396	80		
ArtS 1101	MLK	20	7	1.71	n.s.
	Non-MLK	1,248	246		
Comp 1001	MLK	95	25	2.16	n.s.
	Non-MLK	6,346	1,198		
Comp 1002	MLK	79	28	3.39	n.s.
	Non-MLK	5,781	1,365		
Comp 1003	MLK	45	18	.56	n.s.
	Non-MLK	3,432	1,112		

continued

Appendix A (continued)

Course	Group	Number of grades		χ^2	Sig. level
		Passing	Non-passing		
No difference in proportion of MLK and non-MLK students passing					
Econ 1002	MLK	16	4	.07	n.s.
	Non-MLK	2,656	570		
Geog 1301	MLK	23	4	.04	n.s.
	Non-MLK	2,862	552		
Hist 1301	MLK	17	3	.15	n.s.
	Non-MLK	1,646	371		
Hist 1302	MLK	22	7	.30	n.s.
	Non-MLK	1,513	379		
Hum 1001	MLK	23	11	3.06	n.s.
	Non-MLK	2,950	748		
PO 1001	MLK	20	10	2.16	n.s.
	Non-MLK	426	119		
Psy 1002	MLK	27	8	1.77	n.s.
	Non-MLK	4,584	798		
Soc 1002	MLK	19	2	.17	n.s.
	Non-MLK	1,184	170		
Soc 1004	MLK	31	6	.00	n.s.
	Non-MLK	1,255	249		
Soc 3801	MLK	16	7	3.18	n.s.
	Non-MLK	961	189		
Span 1102	MLK	33	14	2.48	n.s.
	Non-MLK	1,364	349		
Span 3505	MLK	15	1	.84	n.s.
	Non-MLK	4	1		
SW 3001	MLK	26	6	.93	n.s.
	Non-MLK	1,419	211		
Th 1101	MLK	27	4	1.57	n.s.
	Non-MLK	4,097	313		

continued

Appendix A (continued)

Course	Group	Number of grades		χ^2	Sig. level
		Passing	Non-passing		
Difference in proportion passing favoring non-MLK students					
Afro 1301	MLK	40	18	9.87	< .01
	Non-MLK	324	55		
Anth 1001	MLK	17	9	7.33	< .01
	Non-MLK	1,430	257		
Anth 1002	MLK	42	17	9.58	< .01
	Non-MLK	4,182	708		
Comm 1001	MLK	18	17	23.13	< .001
	Non-MLK	1,826	381		
Econ 1001	MLK	20	13	6.52	< .02
	Non-MLK	3,095	829		
Jour 1001	MLK	13	8	4.18	< .05
	Non-MLK	1,063	266		
Phil 1001	MLK	20	22	13.36	< .001
	Non-MLK	2,419	898		
Pol 1001	MLK	32	14	5.88	< .02
	Non-MLK	3,073	625		
Psy 1001	MLK	42	39	56.10	< .001
	Non-MLK	6,075	1,217		
Soc 1001	MLK	76	28	13.42	< .001
	Non-MLK	7,486	1,243		
Soc 3101	MLK	24	8	6.90	< .01
	Non-MLK	2,392	282		
Span 1101	MLK	39	27	9.40	< .01
	Non-MLK	1,472	473		
Spch 1101	MLK	28	9	4.67	< .05
	Non-MLK	2,787	397		

[a]Observed differences marked n.s. are not statistically significant (i.e., the probability of their occurrence by chance is greater than or equal to five in 100).

Appendix B

Course Follow-up Survey

COURSE FOLLOW-UP SURVEY

To the Participant

Since 1968, disadvantaged students have been entering the University of Minnesota through the Martin Luther King (MLK) Program and have been using the special services (e.g., advising, tutoring) of the MLK Program. This questionnaire elicits information to assist advisers and students in that program, as well as other University students, counselors, and instructors.

With your assistance, we hope to look at aspects of student achievement not analyzed before. While registration and course achievement data can be retrieved from student record files, more subtle characteristics of courses can be supplied only by those who taught them.

Information by each course instructor will be considered completely confidential, and results will be tabulated by groups of courses with similar characteristics (e.g., social science courses, large courses, lecture vs. seminar courses). Specific instructors and/or specific courses will not be named in reports made available to advisers (with the possible exception of large, multi-sectioned courses where instructor identification is impossible).

If you would like further information on the nature of this research project, please feel free to contact Lynette Williamson (373-2714) or Roberta Armstrong (376-3147).

This study is being conducted by the Office of Admissions and Records.

COURSE FOLLOW-UP SURVEY

Instructions

Below is the name and number of a course you taught during the quarter(s) listed. Please answer questions I through XV by writing on the lines at the right of the questions the numbers corresponding to the answers that best apply to this course. We realize that several years have passed since the date(s) indicated below, but we would like you to answer the questions as best you can, based on what was generally true during this time period.

Course Name and Number _____

Quarter(s) and Year(s) Taught _____

I. During the time the course was taught, what was the academic rank of the primary instructor (i.e., the person who had the greatest face-to-face contact with students)? _____

1. Professor.
2. Associate Professor.
3. Assistant Professor.
4. Instructor.
5. Teaching Assistant.

II. In general terms, how would you describe the primary purpose of this course? _____

1. To communicate knowledge (i.e., to acquaint students with the academic discipline).
2. To develop appreciation, as in some art, music, and literature courses.
3. To impart a skill or skills (e.g., languages, performance skills, vocational-technical skills).
4. Other (please specify) _____

_____

III. In this course, which of the following was the major instructional method? (Check only one.) _____

1. Lecture.
2. Discussion.
3. Class presentations by students.
4. Laboratory or consultation with instructor.
5. Other (please specify) _____

IV. In your opinion, to what extent did the course cover issues and material of specific interest to minority students? _____

1. Extensively.
2. Some.
3. Very little.
4. Not at all.

V. What were students in the class told, either verbally or in writing, about the availability of the primary instructor for consultation? _____

1. That he was available any time.
2. That he was available only during specified office hours.
3. That he was available only by appointment.
4. That he was not available for consultation, and that students should consult the course Teaching Assistant.
5. Students were told nothing.
6. Other (please specify) _____

_____

VI. Did you have a course Teaching Assistant? _____

1. Yes, one.
2. Yes, two or more.
3. No.

VII. Did students in the class help plan how grades would be determined? _____

1. Yes, always.
2. Yes, sometimes.
3. No.

VIII. On what basis were grades determined? _____

1. Examinations only [e.g., midquarter(s) and/or final examination(s)].
2. Several short quizzes only.
3. Paper(s) and/or project(s) only.
4. Students' classroom participation only.
5. Combination of the above (please list as many of the above as applicable) _____

_____

IX. If examinations or quizzes were used in your class, of which of the following item types did they predominantly consist? _____

1. Multiple choice.
2. Completion or short answer.
3. Essay.
4. True and false.
5. Combination of the above (please list as many answers as applicable) _____

_____

X. Approximately how many quizzes were given in this course [excluding midquarter(s) and final examination(s)]? _____

1. None.
2. 1-2 quizzes.
3. 3-4 quizzes.
4. 5-6 quizzes.
5. 7 or more quizzes.

XI. Was a final examination given in this course? _____

1. Yes, covering the entire quarter's work.
2. Yes, covering only materials since the last examination.
3. No.

XII. Did you employ in this course any means by which a student could make up an examination or earn extra points, if he was doing poorly or failing the course? _____

1. Yes.
2. No.

XIII. What type of readings were required in this course? _____

1. Textbook(s) only.
2. Instructor-prepared handouts only.
3. Articles only (e.g., reserved reading in the library, a book of readings).
4. Outside reading only, but no specific references given.
5. Combination of the above (please list as many answers as applicable) _____

_____

6. No readings were required.

XIV. Approximately how many pages of reading, on the average, were required in this class per week? _____

1. None.
2. 1-30 pages per week.
3. 31-60 pages per week.
4. 61-100 pages per week.
5. Over 100 pages per week.

XV. Approximately what percentage of the total class enrollment attended each class meeting? _____

1. 80% to 100%.
2. 60% to 79%.
3. 40% to 59%.
4. Less than 40%.

Please return this questionnaire by folding it in half so the return address on the back of this page shows and dropping it in the Campus Mail.

Thank you very much for your assistance.